

542

Poster

Breaking routines; a safe introduction of a short stay programme after breast cancer surgery in four Dutch hospitals

T. van der Weijden¹, M. de Kok², A.C. Voogd³, C.D. Dirksen⁴, C.J.H. van de Velde⁵, J.A. Roukema⁶, C. Finaly-Maraïs⁷, F.W.C. van der Ent⁸, M.F. von Meyenfeldt². ¹Maastricht University Medical Centre, Department of General Practice/School for Public Health and Primary Care (CAPHRI), Maastricht, The Netherlands; ²Maastricht University Medical Centre, Surgery, Maastricht, The Netherlands; ³Maastricht University Medical Centre, Epidemiology, Maastricht, The Netherlands; ⁴Maastricht University Medical Centre, Department of Clinical Epidemiology and Medical Technology Assessment (KEMTA), Maastricht, The Netherlands; ⁵Leiden University Medical Center, Surgery, Leiden, The Netherlands; ⁶St. Elisabeth Hospital, Breast Unit, Tilburg, The Netherlands; ⁷Laurentius Hospital, Surgery, Roermond, The Netherlands; ⁸Orbis Medical Center, Surgery, Sittard, The Netherlands

Background: Breast cancer surgery in day care or 24 hour setting is not yet common practice in every part of Europe. This study aimed to systematically implement a breast cancer care programme incorporating short admission using implementation strategies tailored to the needs of the participating hospitals, and to assess feasibility, safety and facilitating factors.

Material and Methods: A before-after comparative study was performed among breast-cancer patients from four Dutch hospitals. Data were collected during periods of six months before and after an implementation period which also spanned six months. The intervention concerned the short-stay breast cancer care programme as developed by the Maastricht University Medical Centre. The implementation strategy was composed of frequent local plenary multidisciplinary meetings combined with other educational outreach visits tailored at specific pre-determined hospital needs. Outcome parameters were the proportion of patients treated in short stay, number of admission days, complication rate, readmission rate, re-operation rate, and numbers of visits to the emergency departments.

Results: Among 421 eligible patients, 324 (77%) signed informed consent. Although short-stay admission was already common practice at the start of the implementation in one hospital, the mean proportion of patients treated in short stay increased significantly from 45% to 82% ($P < 0.0001$). This increase was not accompanied by a negative effect on the risk of complications, readmissions, reoperations, and the number of visits to the emergency department ($P > 0.05$). Factors associated with treatment in short admission were undergoing breast conserving surgery (OR 5.5; 95% CI 2.1–16.0), having children (OR 3.9; 95% CI 1.1–14.6), being employed (OR 2.8; 95% CI 1.1–7.7), while being aged 65 years or older was associated with a decreased chance on treatment in short admission (OR 0.3; 95% CI 0.1–1.1).

Conclusions: Using a hospital-specific approach for implementation, this study showed that introducing a care programme incorporating short stay following breast-cancer surgery in four different hospitals is feasible and safe. Further studies should focus on optimizing the selection of patients for short admission in order to improve efficiency in healthcare.

543

Poster

Microinvasive breast cancer and T1a breast cancer are different tumours?

B.S. Ko¹, W.S. Lim¹, H.J. Kim¹, J.W. Lee¹, S.B. Kwon¹, Y.M. Lee¹, E.J. Sin¹, B.K. Ku¹, B.H. Son¹, S.H. Ahn¹. ¹Asan Medical Center, GS, Seoul, South Korea

Background: Identification of early-stage breast cancers has increased primarily because of mammographic screening. But the natural history of patients with T1mic breast cancer (less than or equal to 1 mm) or T1a breast cancer (less than or equal to 5 mm) are poorly defined.

Materials and Methods: Between January 1992 and October 2006, 7287 patients had operations performed on invasive breast cancers at Asan Medical Center. In order to compare the clinicopathologic features and treatment outcomes between T1mic and T1a breast cancer we reviewed medical records. We retrospectively checked clinical and pathologic variables including diagnosis, age, BMI, multifocality, hormone receptor status, HER-2 expression status, lymphovascular invasion status etc.

Results: Among 350patients, 171patients were T1mic and 179patients were T1a. The mean age of the two groups were 46.0 years-old. The rate of axillary lymph node metastases was higher in the T1a group (5.2% VS 14.5%). And ER ($p < 0.001$), PR ($p < 0.001$) positive tumors and lymphatic invasion ($p < 0.019$) were significantly higher in T1a patients. But BMI ($p = 0.024$), multifocality ($p < 0.001$), HER2 overexpression ($p < 0.001$), nuclear grade ($p = 0.007$) were higher in T1mic patients. Median follow up is 54.5 month. 19patients were recurred, and 5patients were dead. But There

were neither statistically significant difference in overall survival ($p = 0.567$) or disease-free survival ($p = 0.503$) between these two groups.

Conclusions: Although little size difference shown in these two groups. But there are significantly difference in several clinic pathologic factors between groups. The rate of axillary node metastases was higher in T1a group, there were no difference in overall survival or disease-free survival. As the incidence of these 'minimal' tumors is rapidly increasing, more research will be necessary.

544

Poster

Economic evaluation of a short stay admission programme for breast cancer surgery in four hospitals in the Netherlands

M.F. von Meyenfeldt¹, M. de Kok¹, A.G.H. Kessels², T. van der Weijden³, A.V.R.J. Bell⁴, J.A. Roukema⁵, F.W.C. van der Ent⁶, C.J.H. van de Velde⁷, C.D. Dirksen². ¹Maastricht University Medical Centre, Surgery, Maastricht, The Netherlands; ²Maastricht University Medical Centre, Department of Clinical Epidemiology and Medical Technology Assessment (KEMTA), Maastricht, The Netherlands; ³Maastricht University Medical Centre, Department of General Practice/School for Public Health and Primary Care (CAPHRI), Maastricht, The Netherlands; ⁴Laurentius Hospital, Surgery, Roermond, The Netherlands; ⁵St. Elisabeth Hospital, Breast Unit, Tilburg, The Netherlands; ⁶Orbis Medical Center, Surgery, Sittard, The Netherlands; ⁷Leiden University Medical Center, Surgery, Leiden, The Netherlands

Background: Hospital stay represents an important proportion of breast cancer treatment related costs. Although not very well implemented yet in Europe, short stay (admission, surgery, and discharge the same day or within 24 hours) following breast cancer surgery is part of an established and safe care protocol. A short stay programme for all types of breast cancer surgeries was implemented in four Dutch hospitals. The aim of this study was to assess costs, effects, and cost-effectiveness of a short stay programme (SSP) compared with care as usual (CAU) following breast cancer surgery.

Material and Methods: An economic evaluation was performed alongside a prospective multi-centre before-after implementation study. Data of the period after implementation of the short stay programme were compared with those from care as usual, i.e. the period before implementation.

Both measuring periods and the implementation period spanned six months each. Assessment was performed from a societal perspective (1) with a six week time horizon. Direct and indirect costs were obtained from Case Record Forms and cost diaries. Effectiveness was assessed by calculating Quality Adjusted Life Years (QALYs), using the EuroQol-5D which was administered at four time points. Non-parametric bootstrap simulations were performed to quantify the uncertainty around the mean estimates, and cost-effectiveness acceptability curves were presented.

Results: A total of 324 patients were recruited for the implementation study of whom 262 (81%) returned complete effectiveness data which were used for the economic evaluation. A mean decrease of €955.- (95% CI €-2104.- to €157.-) in societal costs was observed for patients treated according to the short stay programme compared with care as usual. The difference in mean healthcare costs was €883.- (95% CI €-1560.- to €870.-) in favour of the short stay programme. The incremental cost-effectiveness ratio could not be calculated as effectiveness was similar for both groups, i.e. the difference in QALYs was zero. The short stay programme was cost-saving compared with care as usual. The acceptability curves showed that the probability of the short stay programme being more cost-effective than care as usual was over 90% in the base-case analysis.

Conclusions: A short stay programme as implemented is cost saving compared with care as usual. While aiming at good quality and more efficient care, stakeholders should discuss on how to implement such a short stay programme on a larger scale.

545

Poster

Clinical features and characteristics of triple negative breast cancer with "basal-like" phenotype

S. Marinopoulos¹, C. Dimitrakakis¹, M. Sotiropoulou², A. Giannos¹, A. Antsaklis¹. ¹Alexandra Hospital Athens University Medical School, 1st Department of Obstetrics and Gynecology, Athens, Greece; ²Alexandra Hospital, Pathology, Athens, Greece

Background: The aim of our research was to explore the clinical features and characteristics of triple negative breast cancer with "basal-like phenotype", in order to assess the behaviour of these tumours characterised by poor prognosis, affecting young women and lacking effective hormonal or targeted therapy.

Material and Methods: We studied retrospectively 1500 tissue specimens from women with breast cancer, who were diagnosed, operated, histologically examined and treated in our hospital between 2003–2009 (7 years). Median follow up, disease free survival, overall survival, clinical and histological characteristics were recorded. Hormone receptors and Her2(n) gene expression were blindly checked twice by the same pathologist. Regression analysis and chi-square test were mainly used for statistical evaluation of the results.

Results: 133 cases were identified as triple negative breast cancers with “basal-like phenotype”. These women were divided to two age groups, 52.4% <50 years old and 47.6% >50 years old, respectively. Tumor size was described >2 cm in 69.6%, <2 cm in 30.4%. Lymph nodes were positive in 52.4% and negative in 47.6%. Nuclear grade was 1 in 2.4%, 2 in 6.1% and 3 in 81.5%, respectively. Overall 7 year survival rate was 79.1%, 7 year disease free survival rate was 77.6%.

Conclusions: Triple negative breast cancers with “basal-like phenotype” are often presented as poorly differentiated tumors and are reported to appear in the younger population. Pathological identification of this specific histology needs training and diagnostic experience in order to minimize false further therapeutic interventions.

546

Poster

Age of breast cancer patients in Iran; a trend analysis

N. Mehrdad¹, A. Olfatbakhsh¹, M. Ebrahimi². ¹Iranian Center for Breast Cancer (ICBC), Surgery, Tehran, Iran; ²Iranian Center for Breast Cancer (ICBC), Epidemiology, Tehran, Iran

Background: Breast cancer is the most common cancer among Iranian women (24 per 100000) and they are younger than their counterparts in developed countries. The present study was conducted to assess any change in patients' age at diagnosis of breast cancer during last 12 years.

Material and Methods: In all, 1266 patients with breast cancer who diagnosed and treated in Iranian Center for Breast Cancer during 1997–2008, enrolled in the study. We divided our patients into three groups based on year of diagnosis. The mean age of patients was compared between three groups using one way ANOVA.

Results: The mean age of patients during the period of 1997–2000, 2001–2004, 2005–2008 were 45.4, 46.9 and 47.9 respectively. Difference between three groups was statistically significant ($p = 0.006$).

Conclusions: Iranian patients with breast cancer are young; however the mean age of patients is increasing. It seems that the age trend of breast cancer in Iran is going to change.

547

Poster

Breast cancer in young women in the Algerian west: long term results and prognostic factors

A. Boukerche¹, C. Bechehat¹, A. Yahia¹, R. Madouri¹, M. Cherigane¹, H. Belmoud¹, A.F. Dali-Youcef¹. ¹University Hospital of Oran, Radiation Oncology, Oran, Algeria

Background: The objective of this retrospective study was to discuss the clinical feature, the therapeutic results and the prognostic factors of breast cancer in younger women, in the Algerian west.

Patients and Methods: Data were collected from 41 patients ≤35 years diagnosed with BC and received an adjuvant radiation therapy at the department of radiation oncology of CHU Oran from January to December 1998. Survival curves were estimated by Kaplan-Meier methods. Univariate and multivariate analyses were performed using respectively the log-rank test and the Cox proportional hazards regression models.

Results: The mean age was 31.5 ± 0.9 years (19–35). We have found: 7 T1 (17%), 14 T2 (34%), 6 T3 (15%), 9 T4 (22%), 4 Tx (10%) and 1 Tis (2%); 29 N0 (70%), 6 N1 (15%), 2 N2 (5%) and 4 Nx (10%). 7 cases were stage I (17%), 17 stage II (42%), 12 stage III (29%), 4 unspecified stage (10%) and only one stage 0 (2%). It was a CCI in 95% of the cases. 2 cases (5%) were SBR I grade, 20 (49%) GII and 16 (39%) GIII. 5 patients (12%) received a conservative surgery and 36 (88%) a radical surgery (Patey). The mean of histological tumoral size was 29.3 ± 5.2 mm (10–80). 14 patients (34%) were lymph node negative (pN0). 11 (27%) were classified pN1, 11 (27%) pN2, 4 (10%) pN3 and 1 (2%) pNx. 29% were presented with RH+. 39 patients (98%) received chemotherapy (neoadjuvant and/or adjuvant) and 15: endocrine therapy (Tamoxifen). With a median follow-up of 61 months (14 to 116), 26 patients (63%) developed recurrences (locoregional, distant and secondary breast cancer). 9-year locoregional relapse-free, disease-free (DFS) and overall survival (OS) were respectively: $88.2 \pm 5.6\%$, $24.3 \pm 11.2\%$ and $62.7 \pm 8.3\%$. In univariate analysis, T3–4 ($p = 0.001$), stage III ($p = 0.0007$), RH- ($p = 0.009$) were associated with shorter DFS; stage III ($p = 0.05$) and not taken Tamoxifen ($p = 0.003$) for OS. In multivariate analysis, the hormone-resistance of the tumor seems to have an influence of DFS ($p = 0.13$; HR = 2.854); and only

stage III had an influence within the limit of the significance ($p = 0.06$; HR = 3.446) and not taken Tamoxifen ($p = 0.02$; HR = 12.22) an influence for OS.

Conclusion: With a high rate of recurrences, the prognostic of breast cancer in young women is unfavourable specially in cases of advanced tumor disease (stage III), if we do not taken Tamoxifen and with a least degree of hormone-resistance of the tumor, where the necessity of an intensification therapeutic.

548

Poster

The incidence of skin infections in breast cancer related lymphedema

M. von Meyenfeldt¹, T.R. Lopez Penha¹, K.B.I.M. Keymeulen¹, J.J.G. Slangen¹, A.W.M. Vermazen¹. ¹University Hospital Maastricht, Department of Surgery, Maastricht, The Netherlands

Background: Breast cancer related lymphedema is infamous for its debilitating effects on the quality of life of breast cancer survivors. Not only affecting physical and emotional function, but also possibly making these patients more prone to skin infections of the affected breast or extremity. Limited literature is available on the elevated incidence of erysipelas, lymphangitis and cellulitis in patients with lymphatic dysfunction secondary to breast cancer treatment. The objective of this study was to evaluate the incidence of skin infections over a 5-year period in a group of women, selected as part of a previous study measuring the prevalence of lymphedema using four different techniques, after surgical and adjuvant treatment for unilateral breast cancer.

Material and Methods: A group of 145 patients were divided into two groups: Diagnosed lymphedema and no lymphedema. Self reported skin infection on the operated side in the upper extremity or breast was confirmed by searching for a documented occurrence of the infection in a patient's clinical chart. Association was tested using chi-square.

Results: Eleven patients presented over a 5-year period with erysipelas, lymphangitis or an erysipelas-like infection. An incidence of 15% was found in the breast cancer related lymphedema group for skin infections, with a borderline significant association; $\chi^2(1) = 4.63$, $p = 0.069$ (95% CI: 1.05–12.822).

Conclusion: This report confirms the low prevalence of skin infections on the operated side in the upper extremity or breast. Breast cancer related lymphedema increases the risk of bacterial skin infections. As the confidence interval is >1, significance of our observation is expected in a larger sample size. Furthermore, our findings suggest the possibility of a non-infective skin inflammation as an additional complication of breast cancer related lymphedema.

549

Poster

Exploring new approaches to follow-up care for early breast cancer in Australia

H. Zorbas¹, C. Giles², G. Marr³. ¹National Breast and Ovarian Cancer Centre, CEO, Sydney, Australia; ²National Breast and Ovarian Cancer Centre, General Manager, Sydney, Australia; ³National Breast and Ovarian Cancer Centre, Program Coordinator, Sydney, Australia

Background: Best practice guidelines recommend follow-up after treatment for breast cancer. With increasing numbers of women diagnosed and increasing survival[1], more and more women require regular clinical and imaging review, as well as management of physical and psychological sequelae of diagnosis and treatment. In Australia, follow-up is mostly carried out in the tertiary setting. This places considerable strain on the system and clinician's workloads. Shared care between specialist and primary care settings provides a possible safe and effective solution to this issue.

Materials and Methods: To assess current practice and identify key elements for the provision of safe and effective shared care, a literature review, survey of breast surgeons and nurses, and descriptive study of follow-up practice in Australia were undertaken. A multidisciplinary panel with expertise in general practice, disciplines relevant to all aspects of cancer management and key stakeholder groups guided the project including the development of 'Principles for shared care'.

Results: Shared care is a model of care between specialist and primary care that has been successfully and safely implemented in a range of health settings. Common elements in models of shared care were identified from the literature. These elements inform the 'Principles of shared care' and provide a flexible definition of shared care to promote the provision of optimal care.

The survey found that, in Australia, follow-up after treatment for breast cancer is usually delivered in the specialist setting. The concept of shared care for follow-up was strongly supported by surgeons, particularly if there was a care plan in place. The descriptive study found that the general